STATE OF MARYLAND

DHMH

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August 18, 2009

Public Health & Emergency Preparedness Bulletin: # 2009:32 Reporting for the week ending 08/15/09 (MMWR Week #32)

CURRENT HOMELAND SECURITY THREAT LEVELS

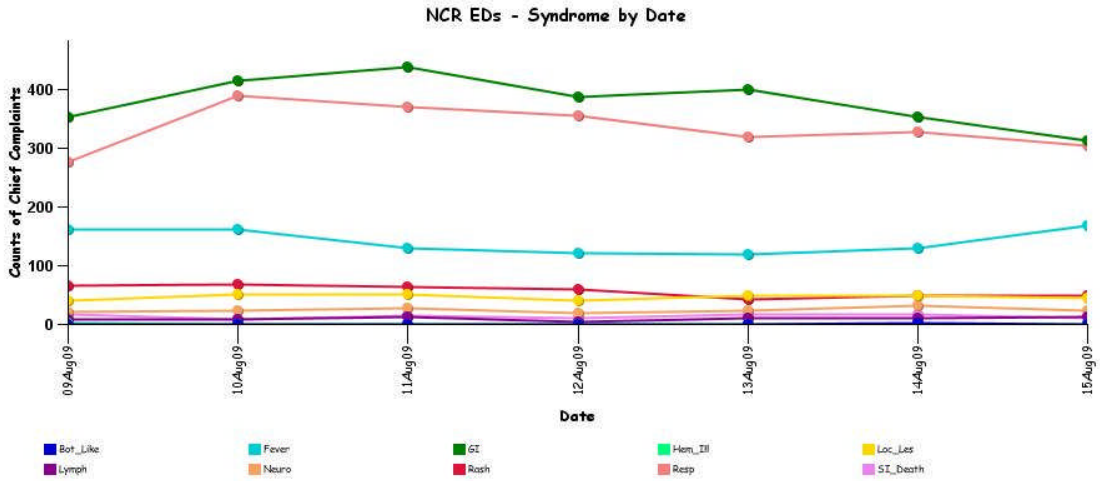
National: **Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)**
Maryland: **Yellow (ELEVATED)**

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics): Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

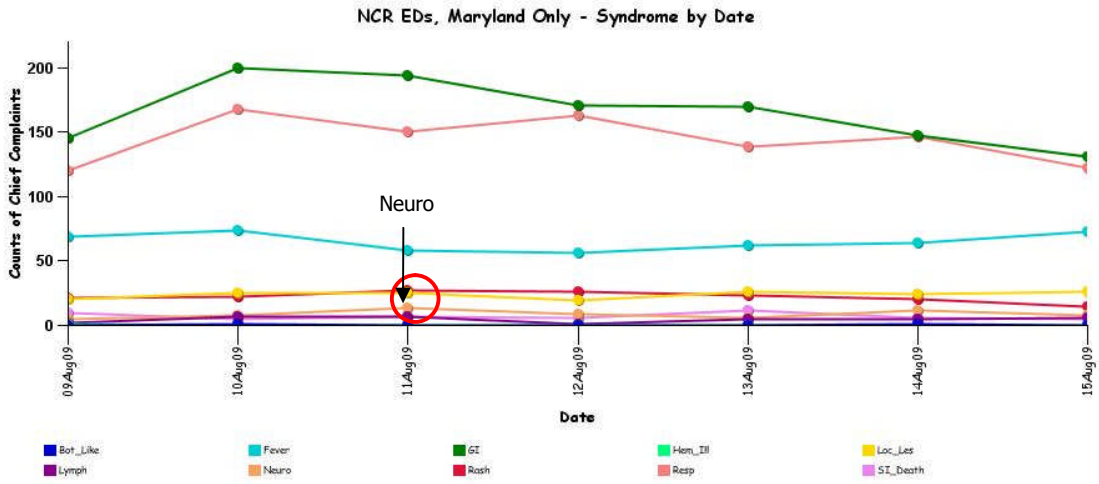
Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

****Data for graph of NCR EDs is not complete due to technical issues.**

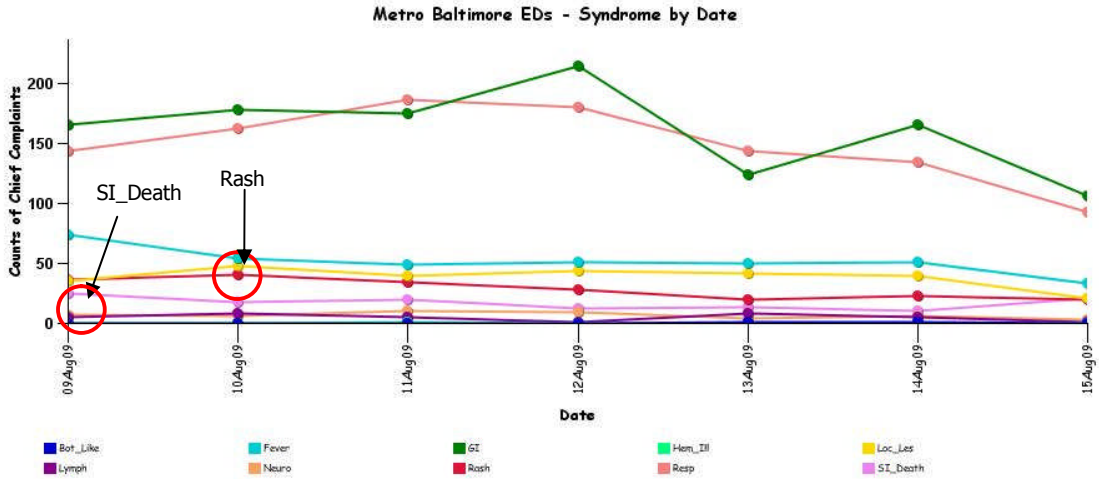


* Includes EDs in all jurisdictions in the NCR (MD, VA, DC) under surveillance in the ESSENCE system.

****Data for graph of NCR EDs, Maryland Only is not complete due to technical issues.**

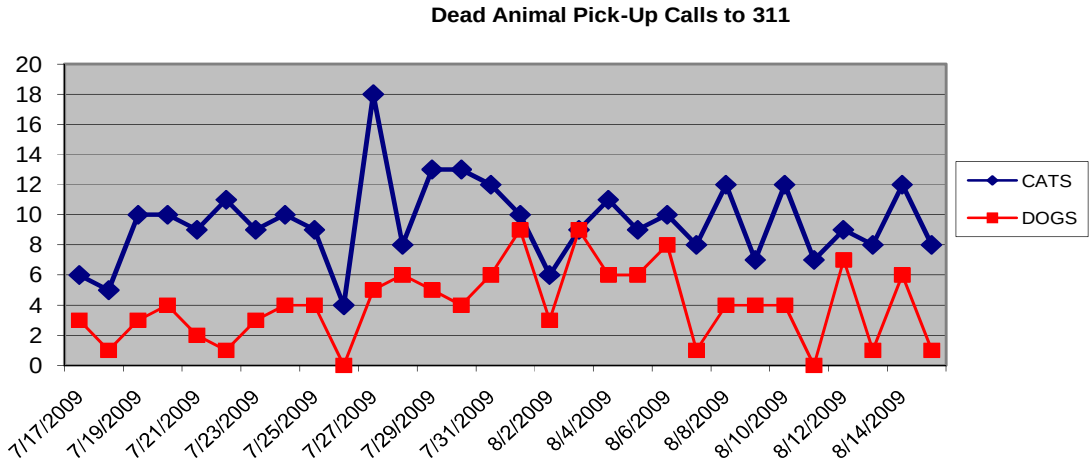


* Includes only Maryland EDs in the NCR (Prince George's and Montgomery Counties) under surveillance in the ESSENCE system.



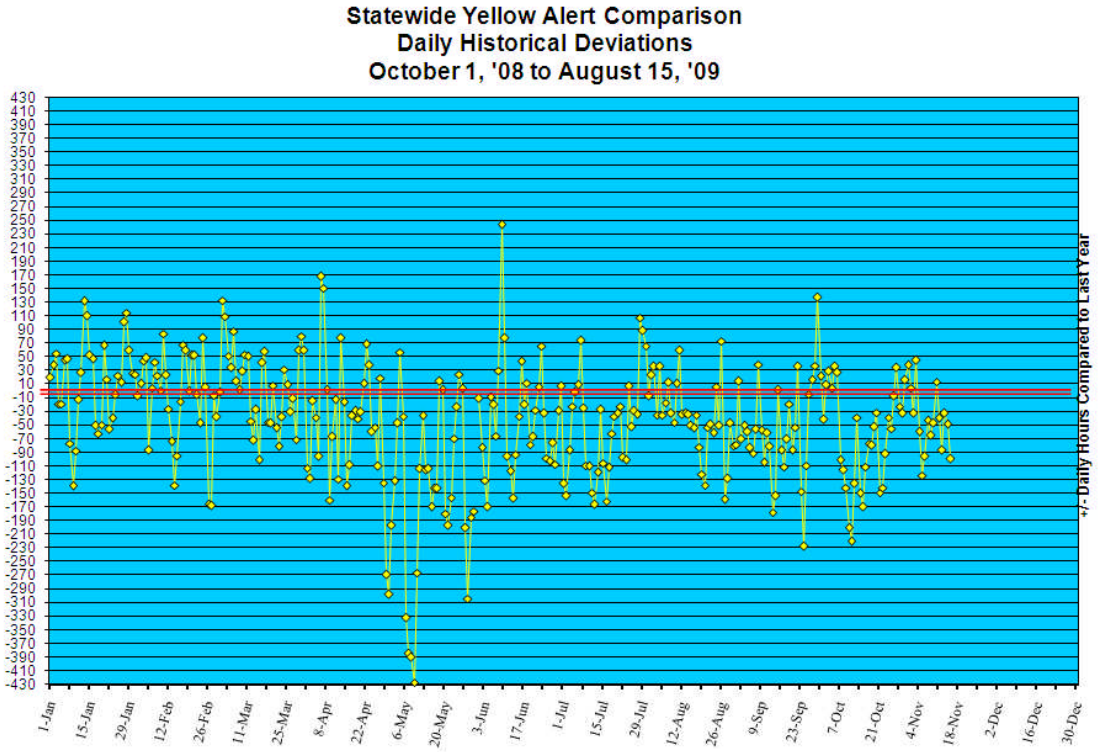
* Includes EDs in the Metro Baltimore region (Baltimore City and Baltimore County) under surveillance in the ESSENCE system.

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/08.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to BT for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in July 2009 did not identify any cases of possible terrorism events.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (Aug 09- Aug 15, 2009):	17	0
Prior week (Aug 02- Aug 08, 2009):	10	0
Week#31, 2008 (Aug 03 - Aug 09, 2008):	22	0

OUTBREAKS: 3 outbreaks were reported to DHMH during MMWR Week 32 (August 9 - 15, 2009):

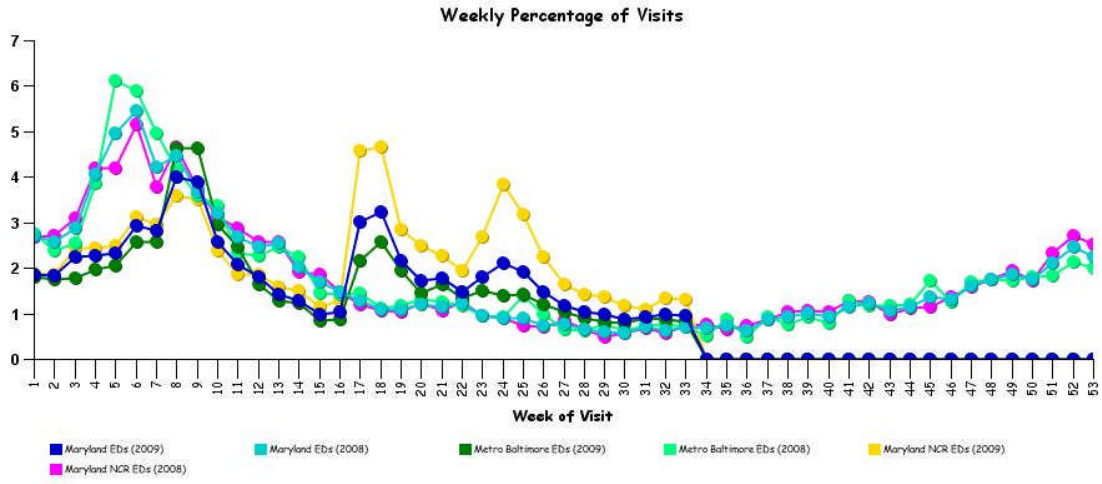
1 Gastroenteritis outbreak
1 outbreak of Shigellosis associated with a Daycare

2 Rash illness outbreaks
2 Rash illness outbreaks associated with Nursing Homes

MARYLAND INFLUENZA STATUS: Influenza activity in Maryland for Week 32 is LOCAL.

SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graph shows the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. This graph does not represent confirmed influenza.



***Graph shows proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.**

PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

**More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at: http://preparedness.dhmh.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex(Version7.2).pdf

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of August 11, 2009, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 438, of which 262 have been fatal. Thus, the case fatality rate for human H5N1 is about 60%.

AVIAN INFLUENZA, HUMAN (Egypt): 11 Aug 2009, The Ministry of Health of Egypt has reported 2 new confirmed human case of avian influenza A (H5N1). The 1st case is an 8 year old girl from Kfr Elsheikh district, Kfr Elsheikh Governorate. Her symptoms started on 24 Jul. She was admitted to Kfr Elsheikh fever hospital on 25 Jul, where she received oseltamivir treatment. The patient is in a stable condition. The 2nd case is an 18 month old boy from Shebin Elkom district, Menofyia Governorate. His symptoms started on 28 Jul. He was admitted to Shebin Elkom fever hospital on 29 Jul, where he received oseltamivir treatment, and is in a stable condition. Investigations into the source of infection indicated that both cases had close contact with dead and/or sick poultry. The cases were confirmed by the Egyptian Central Public Health Laboratories. Of the 83 cases confirmed to date in Egypt, 27 have been fatal.

AVIAN INFLUENZA, WILD BIRDS, H5 (Mongolia): 11 Aug 2009, An official with Mongolia's Emergency Situations Ministry has confirmed to Xinhua on 11 Aug 2009 that avian influenza recently occurred in Arkhangai Province. Mongolian disease control and prevention agencies found 56 dead swans, wild geese, and other kinds of birds in the area around Shelechagan Lake in Tsetserleg District of Arkhangai Province and after testing samples, confirmed that the birds had died of avian influenza virus. For the moment, it has been confirmed that the virus is H5 subtype.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC (H1N1), DRUG RESISTANCE: On 6 Aug 2009, the Centers for Disease Control and Prevention (CDC) detected evidence of resistance to the antiviral medication oseltamivir in 2 severely immunosuppressed patients with novel influenza A (H1N1) virus infection in Seattle, Washington. The 2 patients were treated in 2 different hospitals, and their cases were not epidemiologically linked. Both were being treated with oseltamivir for novel influenza A (H1N1) virus infection and had prolonged viral shedding. In both patients, the virus was documented as initially susceptible to oseltamivir, and resistance developed subsequently during treatment with the drug. Testing of viral RNA from both patients by pyrosequencing detected a mutation that results in a histidine-to-tyrosine substitution at position 275 (H275Y) in the neuraminidase, known to be associated with oseltamivir resistance (4,5). The results were confirmed by pyrosequencing, sequencing of the neuraminidase gene, and neuraminidase inhibition testing of virus isolates on 11 Aug 2009. One patient's symptoms resolved after treatment with oseltamivir, and the other patient was receiving treatment with zanamivir and ribavirin as of 13 Aug 2009. An investigation of health care personnel (HCP) contacts and other close contacts revealed no evidence of virus transmission. A full report in MMWR Dispatch (14 Aug 2009 / 58 (Dispatch); 1-4) summarizes the case histories and resulting investigations and highlights the importance of 1) close monitoring for antiviral drug resistance among mmunosuppressed patients receiving treatment for novel influenza A (H1N1) virus infection and 2) the implications for infection control.

Resources:

http://www.cdc.gov/h1n1flu/

http://www.dhmh.maryland.gov/swineflu/

NATIONAL DISEASE REPORTS

EASTERN EQUINE ENCEPHALITIS, EQUINE (Virginia): 13 Aug 2009, The Western Tidewater Health District [Virginia] on Monday 10 Aug 2009 received confirmation of positive tests for eastern equine encephalitis [EEE] in 2 horses that lived near Route 13. The deadly virus is transmitted by mosquito bites. The city has seen increased virus activity this year, with 7 sentinel chickens and 50 mosquito pools testing positive for the disease. Equine veterinarian John Sangenario said last month that Dominion Equine Clinic in Suffolk had seen 5 cases of the disease in Suffolk horses. City spokeswoman Debbie George said she didn't know why the confirmed number differed from what Sangenario reported.

Signs of the virus in horses include staggering, circling, depression, and sometimes fever and blindness. It can be prevented in horses by vaccination, but there is no cure. There is no vaccine against the disease for humans, but Suffolk residents can protect themselves by following these steps, according to the health district: use mosquito repellent; wear long sleeves and pants; avoid the outdoors from dusk to dawn, when mosquitoes are most active; eliminate standing water outside where mosquitoes can breed; remove discarded appliances; cover boats so they and the covering do not hold water; and trim vegetation that provides mosquito hiding places. Symptoms of the disease in humans can include headache, fever, loss of appetite, aching muscles, tiredness, encephalitis, and coma. The disease may kill up to 35 per cent of people who develop encephalitis, making it considerably more deadly to humans than West Nile Virus, according to the health department. Horse owners are reminded to ensure their horses' vaccinations are up to date, the health department added. In Chesapeake, a goat has been diagnosed with a suspected case of eastern equine encephalitis - a rarity, according to the Virginia Department of Agriculture and Consumer Services [VDACS]. "It is unusual to see EEE in a goat," said Dr Joseph Garvin, VDACS' director of laboratory services, "and that may indicate a very high level of EEE virus in the environment." For more information about the virus, visit the Virginia Department of Agriculture and Consumer Services' website at <http://www.vdh.virginia.gov> or call the health district at 514-4767. (Viral encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

TULAREMIA, HUMAN (Alaska): 10 Aug 2009, Two residents of Fairbanks, Alaska have been diagnosed with tularemia, a potentially fatal bacterial infection more commonly found in animals. Alaska Department of Fish and Game veterinarian Kimberlee Beckmen learned of the outbreak from state public health authorities late last week. The disease can be transmitted to humans from snowshoe hares, and the hare population has been high in the interior. It's unclear how the Fairbanks residents contracted it. Beckmen says people are usually infected through the skin by handling sick hares, but they can also get it when bitten by ticks, flies, or mosquitoes that fed on sick hares. A Fish and Game spokeswoman says the Fairbanks patients were treated with antibiotics and are doing well. (Tularemia is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

ANTHRAX, HUMAN, BOVINE (Uzbekistan): 13 Aug 2009, A 52 year old man died from anthrax in a small city, Toytepi, 25 km from Tashkent on 3 Aug 2009. This man and several of his neighbors became infected from the meat of a sick animal, the local residents say. The sick animal belonged to the neighbor of the deceased, who knew about the disease but slaughtered the animal and sold the meat across the street. People say that more than 20 fell sick and more than 10 of them died. Some of the infected are children, who swam in the water, which was contaminated by the viscera of the sick cow. The hospital where this case was admitted confirmed his death, but the deputy of the state sanitary-epidemiological surveillance department said that the cause of his death was not anthrax. The official report says that this was the first case and first fatality from anthrax this year. There were 2 fatal cases during the last year and no cases in 2007. The worst year was 1991, when about 60 people died from anthrax. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

PLAGUE, PNEUMONIC, WHO REPORT (China): 11 Aug 2009, On 1 Aug 2009, the Ministry of Health (MoH), China reported a cluster outbreak of pulmonary plague cases in the remote town of Ziketan, Qinghai province. The 1st case was a 32 year old male herdsman, who developed fever and hemoptysis on 26 Jul 2009. He was referred to a hospital but died en route, and was buried the following day. On 30 Jul 2009, 11 people who had close contact with the case (mainly relatives who attended the funeral) developed fever and cough, and were all hospitalized. On 1 Aug 2009, specimens taken from all these 12 people, including the 1st case, tested positive for plague. On 2 Aug 2009 both the 64 year old father-in-law of the index case and a 37 year old male neighbor of the 1st case (who helped to bury the corpse) also died. Of the remaining 9 cases, one is in critical condition, one had acute symptoms of fever and cough, and 7 are in stable condition. As of 6 Aug 2009, the local health authority has isolated 332 close contacts for further medical observation, and implemented traffic control around the affected area. Experts on both disease prevention and control and clinical management have been dispatched to Qinghai province. Protective clothes, X-ray machines and other medical equipment have been sent to the affected area. Prevention guidance pamphlets have also been disseminated. According to the epidemiological investigation, the source of this outbreak was a wild marmot, which had contact with the dog of the index case. Ziketan is in an area of natural plague bacteria circulation amongst animals and at the present time it is the active season for plague transmission amongst animals. No drug resistance of the bacterium has been found so far and the 3 death cases have been attributed largely to delayed treatment. China has established a national surveillance network for plague, and has prepared necessary supplies in high-risk areas. After this outbreak, special funds, supplies and experts were quickly dispatched to the affected area. (Plague is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, BOVINE, CAPRINE (France): 11 Aug 2009, The laboratory of the French agency for food safety (AFSSA) has confirmed anthrax on a farm. Anthrax has occurred in a goat and cattle in Bertholene. As a preventive measure, 500 animals have been vaccinated. The Aveyron departmental directorate of veterinary services (DDSV 12) on 22 Jul 2009 announced a case of anthrax in a cattle and goat farm in Bertholene. The suspicion goes back to 15 Jul 2009, when the necropsy of several dead animals was undertaken by the departmental laboratory. Anthrax was then confirmed by the French agency for food safety (AFSSA), based in Maison-Alfort. But without waiting for the result, DDSV initiated the required sanitary measures - disinfection, clinical monitoring, and limiting the movement of animals on this farm - have been undertaken. And, in recent days, an extensive vaccination campaign was initiated for nearly 150 cattle and 350 goats. At the same time, all persons working on the farm and those in direct contact with the animals have been entrusted to the care of the inter-regional epidemiology unit (CIRE) and the internal medicine department of the Jacques

Puel hospital in Rodez. Although no human cases of the disease have been detected, all persons were subjected to preventive treatment. "This disease was not reported in the department for many years. However, 2 outbreaks were found in Lozere and the Cantal in early 2007," says DDSV indicating that these diseased animals were found in summer grazing cattle from herds in Aveyron. Even if it remains limited to a single holding, the emergence of this disease constitutes a new blow to agriculture in Aveyron. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, BOVINE (Kyrgyzstan): 11 Aug 2009, The skin form of anthrax has been confirmed in only 6 people out of the 17 hospitalized. All 6 are from Aksi district of Jalalabad. These 6 are currently under treatment in district hospitals. The remaining 11 people from the villages of Toktogul, Semet, and Toruk are also under medical observation. The Ministry of Health press service also stated that a 20 year old man from Suzak village of Tula Bulak district who was hospitalized with a preliminary diagnosis of anthrax is also under treatment in the infectious disease hospital of Jalalabad. The Ministry of Health press service said that information campaigns are being conducted to prevent the further spread of anthrax. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, BOVINE (France): 10 Aug 2009, Two new suspected anthrax cases in animals have been reported in the communes of Villard-Sallet and La Table (Savoie) and are in the process of being confirmed, said the prefecture of Savoie in a statement released on 7 Aug. In addition 2 new suspected anthrax cases have been reported in cattle in the commune of La Chapelle-du-Bard (Isere), bordering the area currently infected in the department of Savoie. On 7 Aug, outbreaks of anthrax were confirmed in 8 farms - 6 cattle farms and 2 horse holdings - in Savoie, in the communities of Etable, La Table, La Trinite, and Presle. The sick animals are being treated with antibiotics. Vaccination is now being implemented in the suspected and confirmed outbreak locations as well as in all ruminant farms located within a radius of 17 municipalities. By order of the prefecture of 7 Aug, 6 communes in Savoie and a commune in Isere were added to the previous list. Health measures of disinfection, clinical monitoring, and restriction of the movement of animals, as well as vaccination against anthrax, of all bovines, sheep, and goats, established on the premises or imported, in the communes of Arvillard, Champlaurent, Detrier, Etable, La Chapelle Blanche, La Croix de la Rochette, La Rochette, La Table, La Trinite, Le Bourget en Huile, Le Pontet, Le Verneil, Presle, Rotherens, Villard Leger, and Villard-Sallet are mandatory. The same measures are applied in the commune of Chapelle du Bard, in Isere. The Departmental Directorates for Health and Social Affairs of Savoie and Isere are being informed of all suspected cases and are conducting a census of all persons who could have been exposed so that appropriate medical care can be undertaken. No human cases have been found to date. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

Oseltamivir-Resistant Novel Influenza A (H1N1) Virus Infection in Two Immunosuppressed Patients - Seattle, Washington, 2009 MMWR Dispatch, August 14, 2009 / 58 (Dispatch); 1-4. This report summarizes the case histories and resulting investigations and highlights the importance of 1) close monitoring for antiviral drug resistance among immunosuppressed patients receiving treatment for novel influenza A (H1N1) virus infection and 2) the implications for infection control.
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm58d0814a1.htm?s_cid=mm58d0814a1_e

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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